UNITED STATES DEPARTMENT OF AGRICULTURE
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OFFICE OF INFORMATION

IF THE CORN BORER COMES
(Eastern Border Area)

Anytime, week of March 12

NOT FOR PUBLICATION

(ANNOUNCER: One announcer only is required for this release)

ANNOUNCEMENT: Now comes the weekly 10-minute period which Station _______ and its farmer listeners devote to a discussion of the farming problems which will arise IF THE CORN BORER COMES to Eastern region not now infested. Today, a specialist of the U. S. Department of Agriculture, a leader in the federal and state drive against the corn borer, supplies facts about what the borer has done where it got well established, and just how farmers in the infested areas carry on one of the most important spring control measures--clean plowing.

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In Kent County, Ontario, Canada, John Johnson farms 150 acres of good land. Until two years ago his main source of income was Flint corn which he sold for seed. The 30 acres he usually planted to corn yielded from 500 to 1,000 bushels according to the season. Then came the corn borer invasion. In 1926, Johnson reduced the corn acreage to 19 acres, because of borer damage. He got only 200 bushels from the 19 acres. Last year he cut his corn planting to 10 acres. This year he doesn't intend to grow corn. He replaces the corn with beans, cabbage, and more wheat.

Johnson estimates conservatively that the corn borer has decreased his income $500 per year.

His experience is a pretty good answer to the question sometimes raised--does the corn borer menace the corn crop of the United States? It's a startling answer. But there is this encouraging footnote to Johnson's story. He believes that a smaller corn acreage for a few years and a permanent clean-up can hold the pest in check. That he's correct is indicated by the fact that the Ontario clean-up in the spring of 1927 reduced corn-borer infestation 50 per cent. The Canadians, along with farmers of the United States, are learning to live with the corn borer and keep it under control.

It seems worth while to try to keep down borer damage when we recall that the fight is made to protect a crop valued annually at about 2 billion dollars; a crop, moreover, on which our great livestock industry depends.

Joe Srigley, another Ontario farmer living in Kent county, has a true story to tell that indicates how the corn borer affects stock raising.

Srigley used to specialize in hogs, selling as much as $1,500 worth of hogs each year. The corn borer has forced him to shift to poultry. Last year he planted four acres of corn. Before the corn borer came to Ontario and

started eating the corn he used to feed to hogs, he planted 30 acres. Now he keeps a flock of 750 chickens and a herd of 10 dairy cows to take the place of hogs and corn.

Listeners who have not visited infested areas probably are curious about just how the corn borer damages the corn plant so as to cause such heavy crop losses.

The borer, which is the larvae stage of the insect, hatches from eggs which the moth lays on the leaf of the corn plant, bores into the corn stalk, and begins to eat his way up and down. This tunneling of the stalk does the most damage, though serious losses result because of the reduction in number and quality of the ears. In badly infested Canadian fields where there are 40 or 50 borer in one plant the stalks become mere hollow shells and break over before the ears have a chance to mature. Borers are found in every part of the plant--the stalk, the cob, and the ear.

Just now in the infested regions farmers are planning one of the most important spring control measures--clean plowing. In the remainder of this talk five questions which are continually cropping up about plowing as a means of borer control will be answered. The first is:

Does plowing kill the borer?

And the answer is that the mere plowing under of infested cornstalks does not of itself kill many borers. Most of the pests crawl up to the surface sooner or later. But notice this: if a clean job of plowing is done, borers coming to the surface can't find any shelter. Exposed to the weather and to the attacks of their natural enemies--birds, ants, ground beetles, and various insect parasites and predators--they soon perish.

On the other hand, if the plowing job isn't cleanly done, the borers reaching the surface lodge in fragments of corn husks, cornstalks, corn leaves, stubble, and weeds that may be there and remain snugly housed until they emerge as moths to lay the eggs from which the 1928 army of borers will come.

Now you naturally want to know just what is a clean job of plowing for borer control.

It is plowing which leaves no plant material of any kind on the surface. Not only that, all fragments which might shelter borers must be buried so thoroughly that none will be dragged to the surface later in disking and cultivating. To insure this result, plowing to a depth of 6 inches is recommended; also surface cultivation after plowing to close all large cracks and crevices. But if it isn't possible to plow to a depth of 6 inches, a clean job still can be done by skilful plowmen. The depth isn't important, so long as all fragments are covered to stay covered.

Poor or ordinary plowing does not control the corn borer, and in a good many ways is worse than no attempt to cover litter because it is diffi-

cult to clean up a poorly plowed field by other methods.

Now, I can hear you asking, "How is a clean job of plowing done?"

As I've just said, the skill of the plowman is just as important as the size or type of plow used. Careful, painstaking work to see that all surface refuse is turned under is the first essential. As to the kind of plow: a 14-inch bottom plow equipped with attachments for covering trash gives good results when properly adjusted.

Many farmers have found that fastening three No. 9 galvanized or wrought iron wires to the plow helps cover the trash securely. These wires are about 10 feet long and trail behind the plow. The loose ends are caught by the furrow slice as it turns over. The weight of the soil on the buried ends holds the wire taut, and the wires hold the trash and stalks to the bottom of the furrow slice.

New, especially-designed 16-inch and 18-inch plows well adapted for clean plowing have recently been placed on the market. They do good work in fields of standing corn stalks. Field tests with these plows showed that with the aid of a rolling coulter of proper size and of the wires just described they completely turn under all standing corn stalks and all trash.

And now finally, what is the best time to plow for borer control?

It varies with the region. In the Lake Erie area if the stalks are plowed under in the late fall most of the borers remain inactive in the stalks all through the winter and then crawl to the surface when the soil warms up in April or May. If the stalks are plowed under in late summer, early fall, or spring most of the borers come to the surface soon after plowing. In either case, the important thing is to see that the borers find on the surface no refuse in which to hide. Time of plowing is immaterial.

In New England fields the behavior of the borers plowed under in the late fall is different. There many of the borers buried by plowing after November 1 die before they ever get to the surface. On the other hand, most of the New England borers plowed under in the summer, early fall, or spring migrate to the surface in just about the same way as the borers in the Lake Erie region.

Late fall plowing, therefore, is most effective in New England because it kills off some borers beneath the surface as well as depriving of shelter the borers which survive and get to the surface.

Just a brief summary of the important things to remember about spring plowing to control the corn borer:

First, if plowing is to be effective all trash must be turned completely under so that material may not by later cultivation be dragged to the surface before time for the moths to emerge.

Second, clean plowing controls borers by depriving them of shelter when they crawl to the surface.

Third, average plowing methods must be improved sufficiently to insure that all cornstalks and trash are turned completely under.

Fourth, neither depth of plowing nor time of plowing is important for borer control if a clean job is done and material is not afterward dragged to the soil surface.

Fifth, and last, for a more extended discussion of corn borer control methods, secure Farmers' Bulletin No. 1-5-4-8, issued by the United States department of agriculture.

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ANNOUNCEMENT: Ant that concludes the second of nine weekly broadcasts for which Station _____ has arranged with the U. S. Department of Agriculture in order to aid in the campaign against that menacing crop pest, the European corn borer. Listeners wishing the bulletin just mentioned, may send requests to this station. For the benefit of those who may have missed the number of the Bulletin, it is Farmers' Bulletin 1-5-4-8.